



SPAWAR
Systems Center
San Diego

DATA LINK TEST TOOLS

TADIL J Host Simulator



TOOLS TO SUPPORT TADIL SYSTEMS TESTING

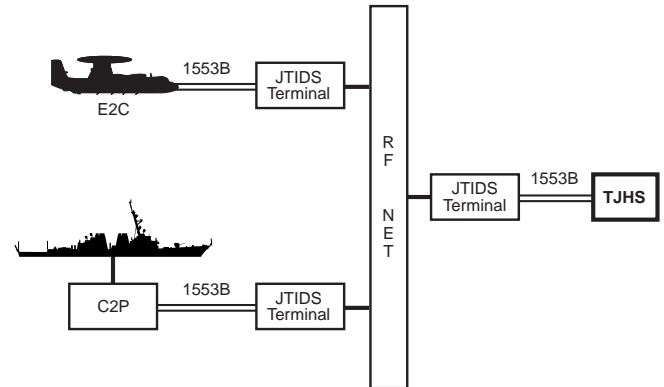
The Tactical Digital Information Link (TADIL) J Host Simulator (TJHS) is one in a family of Data Link Test Tools designed to facilitate Link-16 integration and interoperability testing. It can be configured on either a desktop or laptop computer.

By emulating a Link-16 host system, the TJHS provides an extensive situational display, a low-cost alternative to having a TADIL J-capable host system in the test facility. The TJHS can provide Joint Tactical Information Distribution System (JTIDS) terminal control, or it may be used as a monitor of the 1553B interface between a terminal and another host. The TJHS has data extraction, reduction, and replay capabilities for post-test analysis.

The TJHS can play a key role in the Data Link Gateway system to support TADIL systems testing, training, and problem resolution.

FEATURES/CAPABILITIES

- Transmits and receives TADIL J data
- Terminal control, including load and update of terminal initialization parameters
- Selectable situational awareness display of any/all Link-16 data
- Provides terminal with position data for Precise Participant Location and Identification (PPLI) transmission
- Locally held tracks can be added and reported
- Can send and respond to addressed messages
- External time synchronization for data extraction
- Data extraction (DX) and reduction of I/O messages exchanged over 1553B bus
- Data replay of previously recorded DX file for post-mission analysis
- TADIL J message breakout (MIL-STD 6016A)
- Scripting capability (external track input)
- Air control capability
- Command and Control (C2) conflict and Force Order processing
- Geographic tactical situation display
 - Real-time map can be configured to show latitude/longitude grids, coastal outlines and major cities
 - Displays PPLI symbols, tracks, points
 - Can hook tracks for detailed readout
 - Flexible map controls
 - Range and bearing function available
 - Scrolling list of TADIL J messages can be displayed
 - Scrolling list of Data Extraction and Reduction Guide (DERG) messages can be displayed



Typical TADIL J Host Simulator Test Layout

- Can serve as monitor
 - Provides passive interface to Navy Air, Navy Ship, and Modular Control Equipment (MCE) JTIDS and MIDS terminals via the 1553B bus
 - Processes all traffic Terminal Input Messages (TIMs) and Terminal Output Messages (TOMs), displays relevant tactical information

TERMINALS SUPPORTED

- Class 2H Navy Air and Ship
- MCE
- MIDS (Platform A)

APPLICATIONS

- Host development testing
- Interoperability testing
- System validation
- Deployment testing
- Proof-of-concept testing
- Crew training
- Mission monitoring
- Mission evaluation
- Crew debrief
- Impact analysis
- Demonstrations
- Installation checkouts





DATA LINK TEST TOOLS

TADIL J Host Simulator

SYSTEM COMPONENTS/SUPPORT

Data Link Test Tool (DLTT) systems are configured at SSC San Diego. Modular design and open architecture allow for flexibility and rapid integration of new interfaces and capabilities to suit user needs. The TJHS application package includes:

- High-speed computer, monitor, keyboard (desktop or laptop configuration available)
- Removable hard drive (desktop version only), and floppy drive
- Timing board (where applicable), I/O boards and host terminal interface board
- Operating system software
- TJHS program software

The DLTT Program Office provides full and flexible support services for users, including system configuration, installation, training, ongoing technical support, and upgrade program options.

FURTHER INFORMATION

Data Link Test Tools are a family of applications developed and maintained by the Space and Naval Warfare Systems Center, San Diego, (SSC San Diego), Code D45, to facilitate TADIL integration and interoperability testing.

Further information on the Data Link Gateway system, other Data Link Test Tools and data link testing facilities/services at SSC San Diego is available at the following:

DLTT Web Site: <http://gateway.spawar.navy.mil>

Send email to: gwinfo@spawar.navy.mil

Telephone (toll free in the U.S.): 1-888-GWLinks (495-4657)

Points of Contact

DLTT Program Manager

Space and Naval Warfare Systems Center, San Diego
Code D45
53560 Hull Street
San Diego, CA 92152-5001
USA
Telephone: (619/DSN) 553-3224
FAX: (619/DSN) 553-8221

DLTT Application Engineering Support

Space and Naval Warfare Systems Center, San Diego
Code D4524
53560 Hull Street
San Diego, CA 92152-5001
USA
Telephone: (619/DSN) 553-2601 or (619/DSN) 553-6094
FAX: (619/DSN) 553-8221

DLTT Foreign Military Sales

Space and Naval Warfare Systems Center, San Diego
Code D4524
53560 Hull Street
San Diego, CA 92152-5001
USA
Telephone: (619/DSN) 553-9766 or (619/DSN) 553-9401
FAX: (619/DSN) 553-8221

DLTT System Purchase Support

Space and Naval Warfare Systems Center, San Diego
Code D4524
53560 Hull Street
San Diego, CA 92152-5001
USA
Telephone: (619/DSN) 553-9401 or (619) 553-0033
FAX: (619/DSN) 553-8221 or (619) 553-6773

This technology is related to the subject matter of one or more U.S. patents assigned to the U.S. Government, including patent No. 5,892,765. Licensing inquiries may be directed to: Harvey Fendelman, Office of Patent Counsel D0012, SPAWARSYSCEN SAN DIEGO, 53510 Silvergate Avenue, San Diego CA 92152-5765

SD 365 • April 2001

Approved for public release; distribution is unlimited.